

Appl. No. 10/775,531  
Amdt. dated August 23, 2007  
Reply to Office Action of April 3, 2007

PATENT

**Amendments to the Drawings:**

The attached sheet of drawings includes changes to Fig. 11. This sheet replaces the original sheet including Fig. 11.

Attachment: Replacement Sheet  
Annotated Sheet Showing Changes

### **REMARKS/ARGUMENTS**

Claims 1-33 are pending in this Application.

Claims 1-6, 8, 10, 11, 14-20, 23, and 26-30 are currently amended. Applicants submit that support for the claim amendments can be found throughout the specification and the drawings.

Claims 1-33 remain pending in the Application after entry of this Amendment. No new matter has been entered.

In the Office Action, claims 2, 6, 7, 15-18, and 30 are objected to due to informalities. Claims 1-13, 18, 19 and 26-28 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 1-33 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Claims 1-33 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U. S. Patent No. 6,035,306 to Lowenthal et al. (hereinafter "Lowenthal").

### **Objections to the Oath/Declaration**

The Office Action objects to the oath/declaration as being defective. Applicants respectfully disagree. Applicants point the Examiner's attention to the Application Data Sheet filed with the Application for the alleged missing information. This was confirmed during a telephone conference with Examiner Chen on May 10, 2007, in which objections to the oath/declaration were withdrawn.

### **Objections to the Drawings**

The Office Action objected to FIG. 11 as missing a label "No." Applicants have amended FIG. 11 as suggested in the Office Action to include the label "No" next to the around indicating a negative decision form step 1106 of FIG. 11. Accordingly, Applicants respectfully request reconsideration and withdrawal of the objections to the drawings.

**Objections to the Specification**

Applicants have amended the specification as suggested in the Office Action. Accordingly, Applicants respectfully request reconsideration and withdrawal of the objections to the specification.

**Objections to the Claims**

Applicants have amended the claims as suggested in the Office Action. Accordingly, Applicants respectfully request reconsideration and withdrawal of the objections to the claims.

**Claim Rejections Under 35 U.S.C. § 101**

Applicants respectfully traverse the rejections to claims 1-33 and request reconsideration and withdrawal of the rejections under 35 U.S.C. § 101.

Applicants respectfully submit that the amended claims recite a useful, concrete, and tangible result. For example, claim 1 recites “generating information indicative of a recommendation for a solution for the first performance problem.” Applicants respectfully submit that claim 1, as a whole, recites a useful, concrete, and tangible result in that information indicative of a recommendation for a solution for a performance problem is generated. The result of claim 1 is not merely an indication of the performance problem, but claim 1 recites that information indicative of a recommendation for a solution is generated. Applicants respectfully submit that the information indicative of a recommendation for a solution for a performance problem as generated in claim 1 is a useful, concrete, and tangible result that can be relied upon in the real world by database administrators and IT professionals. (Application: Paragraph [0007]).

Accordingly, Applicants respectfully traverse the rejections to claims 1-33 and request reconsideration and withdrawal of the rejections under 35 U.S.C. § 101.

**Claim Rejections Under 35 U.S.C. § 112, Second Paragraph**

Applicants respectfully traverse the rejections to claims 1-13, 18, 19, and 26-28 and request reconsideration and withdrawal of the rejections under 35 U.S.C. § 112, second paragraph as being indefinite.

In regard to claims 1 and 26, Applicants have amended the claims to remove the term “time” in the phrase “the one or more time values.”

In regard to claim 3, Applicants have amended claim 3 to recite “wherein the symptoms are classified from a first set of performance problems to a second set of performance problems.”

In regard to claims 4 and 18, Applicants have amended the claims to recite “the root performance problem.”

In regard to claims 5 and 19, Applicants have amended claims 1 and 14 to recite “a first performance problem,” and claims 5 and 19 to recite “associating a rule with each performance problem in the one or more performance problems, the rule used to determine if the performance problem associated with the rule may be a cause of the first performance problem.”

Accordingly, Applicants respectfully request reconsideration and withdrawal of the rejections to the claims under 35 U.S.C. § 112, second paragraph.

**Claim Rejections Under 35 U.S. C. § 102(b)**

Applicants respectfully traverse the rejections to claims 1-33 and request reconsideration and withdrawal of the rejections under 35 U.S.C. § 102(b) based on Lowenthal.

Applicants respectfully note that to anticipate a pending claim, a prior art reference must provide, either expressly or inherently, each and every limitation of the pending claim. (M.P.E.P. § 2131).

The Office Action alleges that Lowenthal teaches or suggests all of the claim limitations of claims 1-33. However, based on the arguments presented below, Applicants respectfully submit that Lowenthal fails to teach or suggest at least one of the claim limitation recited in each of claims 1-33.

**Claim 1**

Claim 1 recites a method for diagnosing performance in a database, the method comprising:

- classifying one or more performance problems in a database;
- determining one or more values that quantify an impact for the one or more performance problems based on performance of operations in the database;
- determining a first performance problem from the one or more performance problems based on the one or more values for the one or more performance problems; and
- generating information indicative of a recommendation for a solution for the first performance problem.

Applicants respectfully submit that Lowenthal fails to teach or suggest each and every claim limitation recited in claim 1. In Lowenthal, raw data is collected, and then analyzed and viewed by a DBA to determine what is causing “hot spots,” or over-loaded disks. (Lowenthal: Col. 2, lines 46-48). Thus, in Lowenthal, the DBA has not identified whether a problem yet exists when looking at the raw data. Lowenthal also simply discloses that placement of objects on disks can be improved, even when no problem exists. (Lowenthal: Col. 14, lines 1-3). Therefore, the system in Lowenthal simply suggests where to place objects on disks based on how busy each disk is.

In contrast, claim 1 recites that one or more performance problems are classified, and that one or more values that quantify an impact for the one or more performance problems are determined based on performance of operations in the database. Based on these one or more values, a performance problem is determined from the one or more performance problems. Information is then generated indicative of a recommendation for a solution for the performance problem.

The Office Action alleges that Lowenthal discloses the feature recited in claim 1 of “determining a first performance problem from the one or more performance problems based on the one or more values for the one or more performance problems” in Col. 13, lines 57-59 stating that the DBA looks at individual tablespaces and files stored on the disk until the database objects causing the problem are identified. Applicants respectfully disagree.

Identifying the database objects in Lowenthal as alleged in the Office Action that are causing the problem is substantially different from determining a first performance problem from one or more performance problems as recited in claim 1. Lowenthal simply discloses in Col. 13, lines 57-59 that a DBA hunts through visualizations of raw data collected about each of the disks, and when the DBA thinks that the DBA has identified a problem, hunts through at individual tablespaces and files stored on the disk until the database objects causing the problem are identified. In contrast, claim 1 recites that a first performance problem is determined from one or more performance problems. The first performance problem recited in claim 1 is determined based on the one or more values for the one or more performance problems that that quantify an impact for the one or more performance problem.

Accordingly, Applicants respectfully submit that the manual process of the DBA in Lowenthal to discover a problem does not teach or suggest the method of claim 1 where a first performance problem is determined from one or more classified performance problems. Therefore, Applicants respectfully submit that Lowenthal fails to teach or suggest the feature recited in claim 1 of “determining a first performance problem from the one or more performance problems based on the one or more values for the one or more performance problems.”

The Office Action further alleges that Lowenthal discloses the feature recited in claim 1 of “classifying one or more performance problems in a database” in Col. 4, lines 25-40 of Lowenthal. Applicants respectfully disagree.

Col. 4, lines 25-40 of Lowenthal merely identifies three goals or objectives to reach “optimal placement” in the distribution of objects of a database across a number of disks. The first goal, call “parallelizing,” keeps access time performance within predetermined specifications to allow as many accesses to occur simultaneously as possible. However, simply keeping access time performance within predetermined specifications or identifying that such a goal should be met is substantially different from classifying one or more performance problems in a database as recited in claim 1. The second and third goals if met are disclosed to avoid a slow down in performance, however, merely stating that three goals should be met does not teach or suggest that the goals in Lowenthal are classified as the one or more performance

problems recited in claim 1. Thus, Applicants respectfully submit that Lowenthal fails to teach or suggest “classifying one or more performance problems in a database” as recited in claim 1.

Additionally, the Office Action alleges that Lowenthal discloses the feature recited in claim 1 of “determining one or more values that quantify an impact for the one or more performance problems based on performance of operations in the database” in Col. 8, lines 61-67. Applicants respectfully disagree.

Col. 8, lines 61-67 of Lowenthal merely indicate that a time stamp is associated with data to indicate whether the data is valid. This data in Lowenthal is stored for each disk drive. (Lowenthal: Col. 8, lines 45-46). However, merely indicating whether data is valid using the time stamp in Lowenthal does not teach or suggest values as recited in claim 1 that quantify an impact for the one or more classified performance problems. The time stamp in Lowenthal is simply used to identify stale data. Thus, the time stamp in Lowenthal is substantially different from the values recited in claim 1 that quantify an impact for the one or more classified performance problems.

Moreover, as referenced above, the data in Lowenthal is merely raw data stored for each disk drive. (Lowenthal: Col. 8, lines 45-46). For example, FIG. 9 illustrates the total number of reads, writes, and the like. However, these raw data values in Lowenthal are substantially different from the values recited in claim 1 that quantify an impact for the one or more classified performance problems. Lowenthal clearly shows that the DBA selects which properties to view in FIG. 13 of Lowenthal, and then manually analyzes visual displays of the raw data values, such as in FIG. 14 of Lowenthal, in an attempt to discover whether any problems exist, and then to find out what is the problem. In contrast, claim 1 recites that one or more performance problems are classified, and one or more values are determined based on performance of operations in the database. These values recited in claim 1 quantify an impact for the one or more classified performance problems. Simply collecting raw data samples as in Lowenthal is substantially different from determining one or more values that quantify an impact for the one or more performance problems based on performance of operations in the database as recited in claim 1.

Accordingly, in light of the above, Applicants respectfully submit that Lowenthal also fails to teach or suggest the feature recited in claim 1 of “generating information indicative of a recommendation for a solution for the first performance problem.” Thus, Applicants respectfully submit that claim 1 is allowable over the cited references.

#### **Claim 14**

Applicants respectfully submit that independent claim 14 is allowable for at least a similar rationale as discussed above for the allowability of claim 1, and others. For example, claim 14 recites collecting information that quantifies an impact for one or more operations performed in the database. The information for one or more operations is then associated as recited in claim 14 with one or more performance problems. However, the Office Action merely points to the fact that Lowenthal collects the data shown in FIG. 9. Merely collecting the data as in Lowenthal does not teach or suggest that information that quantifies an impact for one or more operations performed in a database is associated with one or more performance problems as recited in claim 14. Furthermore, claim 14 recites analyzing the associated information for the one or more performance problems to determine a first performance problem from the one or more performance problems. As discussed above, the DBA in Lowenthal merely looks for objects that may be causing a problem the DBA thinks he sees in the raw data. This is substantially different from analyzing associated information for one or more performance problems as recited in claim 14 to determine a first performance problem from the one or more performance problems.

Thus, Applicants respectfully submit that claim 14 is allowable over the cited references.

#### **Claims 2-33**

Applicants respectfully submit that independent claims 14, 26, and 29 are allowable for at least a similar rationale as discussed above for the allowability of claim 1, and others. Applicants respectfully submit that dependent claims 2-13, 15-25, 27-28, and 30-33 that depend directly and/or indirectly from the independent claims 1, 14, 26, and 29 respectively, are



also allowable for at least a similar rationale as discussed above for the allowability of the independent claims. Applicants further respectfully submit that the dependent claims recite additional features that make the dependent claims allowable for additional reasons.

**CONCLUSION**

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

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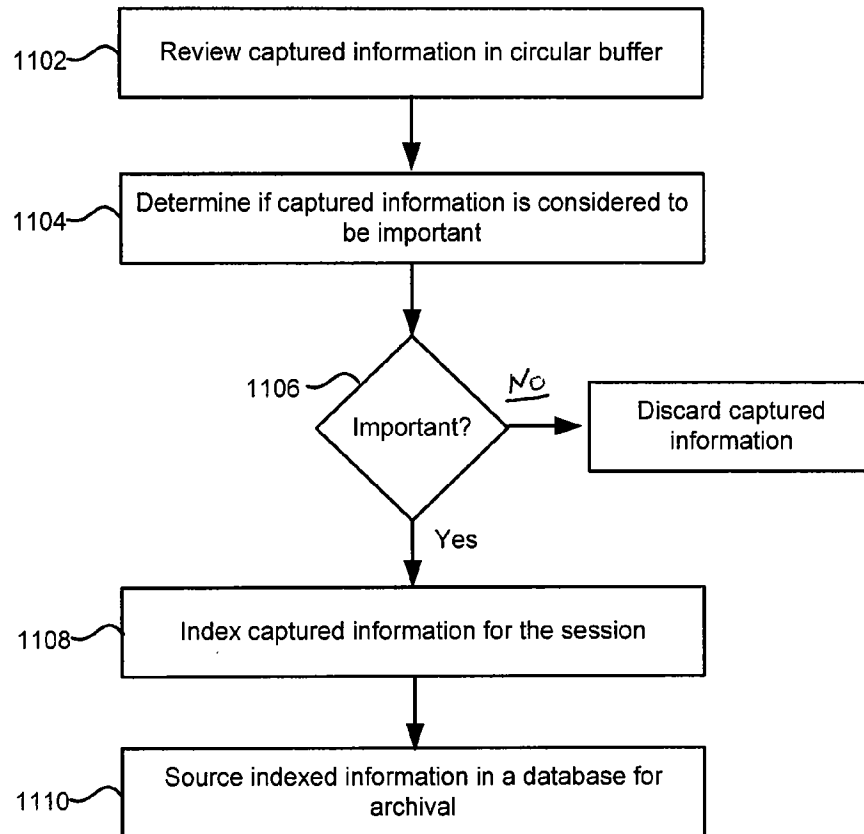


Fig. 11